

Texas Rail Plan: Fewer Trucks on Texas Highways Beyond 2014 ?

Jolanda Prozzi

April 4, 2011

Study Team

- Dr. C. Michael Walton
- Alejandra Cruz-Ross
- Katie Larsen
- Todd Carroll
- Cambridge Systematics
 - Allan Rutter



Freight Rail Tonnage

1991	→	2008	→	2014+
230		384		?
million		million		

Population growth
 Economic growth – 102%
 (1990 to 2010)
 Increased trade (e.g., NAFTA,
 international trade)

+ Panama Canal
 expansion

Texas Ports and Rail

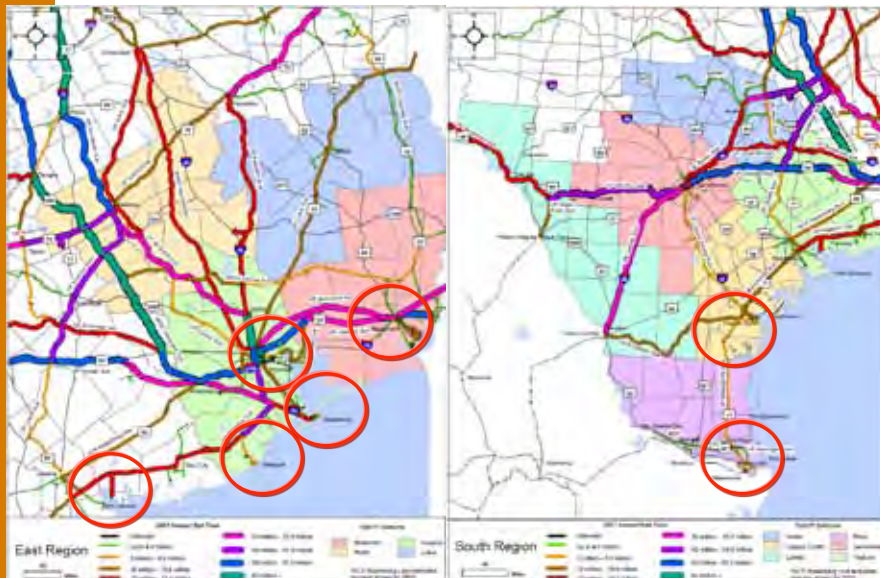


Source: Cambridge Systematics, 2010

Summary of Ports and Connecting Railroads

Port	Port Owner/ Facilities	Connecting Railroads
Beaumont	Port of Beaumont Navigation District	KCS, UP, BNSF
Brownsville	Brownsville Navigation District	Brownsville & Rio Grande International switching with UP, BNSF, KCS
Corpus Christi	Port of Corpus Christi Authority	KCS, UP, BNSF
Freeport	Brazos River Harbor Navigation District	UP
Galveston	Port of Galveston	UP, BNSF
Houston	Port of Houston Authority	UP, BNSF, KCS (via trackage rights)
Orange	Orange County Navigation Port District	UP, BNSF
Port Arthur	Port of Port Arthur Navigation District	KCS, UP*, BNSF* (via trackage rights and switching)
Port Lavaca- Point Comfort	Calhoun County Navigation District	Port Lavaca via UP, Point Comfort via Point Comfort & Northern
Texas City	UP, BNSF	UP, BNSF

Annual Rail Tons 2007



Port and Freight Rail Issues

- Grade crossings
- Sidings
- Rail yard capacity



Landside Chokepoints—Sabine-Neches Area



Source: Cambridge Systematics, Inc. TxDOT Waterborne Freight Corridor Study, 2010

Landside Chokepoints—Houston-Galveston Area



Source: Cambridge Systematics, Inc. TxDOT Waterborne Freight Corridor Study, 2010

Landside Chokepoints—Central Coast Area



Source: Cambridge Systematics, Inc. TxDOT Waterborne Freight Corridor Study, 2010

Landside Chokepoints—South Texas Area



Source: Cambridge Systematics, Inc. TxDOT Waterborne Freight Corridor Study, 2010

TxDOT Freight Studies

- San Antonio
- Houston
- West Texas
- East Texas
- Corpus Christi/Yoakum
- Dallas/Fort Worth
- Rio Grande Valley (ongoing)
- El Paso regions (ongoing)

Estimated Costs of Identified Freight Rail Improvements

- Freight studies identified
 - Crossing closures
 - Grade separation projects
 - New rail connections
- Houston District ~ \$2 billion
- Corpus Christi/ Yoakum Districts ~ \$146 million
- Texas thus far ~ \$3.9 billion

Forecasted Gulf Coast Ports Rail Freight

- TxDOT funded a study on possible impacts of Panama Canal Expansion on Texas ports, rail lines, and highway corridors.
- Final report (released in October 2006) found expansion would have *“significant impacts on Texas ports, their surrounding communities and the highways and rail lines that serve them”*
- Port of Houston the most affected

General Cargo Forecasts for Largest Texas Ports by Tonnage, 2008–2035

Port	2008 (tons)	2035 (tons)			Percent Change		
		Low-Growth	High-Growth	Average	Low-Growth	High-Growth	Average
Beaumont	81,383,531	128,292,792	131,742,692	130,017,742	57.6%	61.9%	59.8%
Brownsville	5,306,311	10,066,802	10,894,183	10,480,493	89.7%	105.3%	97.5%
Corpus Christi	85,859,440	128,342,706	185,781,802	157,062,254	49.5%	116.4%	82.9%
Freeport	36,000,000	53,812,806	58,276,372	56,044,589	49.5%	61.9%	55.7%
Galveston	5,911,882	8,837,082	11,215,654	10,026,368	49.5%	89.7%	69.6%
Houston	225,000,000	354,689,431	364,227,325	359,458,378	57.6%	61.9%	59.8%
Orange	681,982	1,019,427	1,260,129	1,139,778	49.5%	84.8%	67.1%
Port Arthur	29,261,601	43,740,246	47,368,332	45,554,289	49.5%	61.9%	55.7%
Port Lavaca-Point Comfort	4,600,000	6,876,081	7,446,425	7,161,253	49.5%	61.9%	55.7%
Texas City	53,953,540	80,649,761	87,339,349	83,994,555	49.5%	61.9%	55.7%
Victoria	3,035,978	4,538,180	4,902,769	4,720,475	49.5%	61.5%	55.5%
Total	530,994,265	820,865,315	910,455,032	865,660,174	54.6%	71.5%	63.0%

Source: 2009 Texas Port and Waterway Forecast Update, Cambridge Systematics, Inc. November 2009

Forecast Container Increases at Texas Ports (in TEUs)

Port	2008	2035			Percent		
		Low-Growth	High-Growth	Average	Low-Growth	High-Growth	Average
Beaumont	3,280	4,407	4,407	4,407	34%	34%	34%
Brownsville	0	2,658	2,658	2,658	N/A	N/A	N/A
Corpus Christi	0	856,538	1,064,096	960,317	N/A	N/A	N/A
Freeport	71,900	800,000	800,000	800,000	1013%	1013%	1013%
Galveston	8,666	20,822	45,104	32,963	140%	420%	280%
Houston	1,794,309	4,311,277	9,338,893	6,825,085	140%	420%	280%
Orange	0	4,681	4,681	4,681	N/A	N/A	N/A
Port Arthur	170	408	885	647	140%	420%	280%
Total	1,878,325	6,000,792	11,260,724	8,630,758	219%	500%	359%

Source: 2009 Texas Port and Waterway Forecast Update, Cambridge Systematics, Inc. November 2009

Freight Rail Tonnage

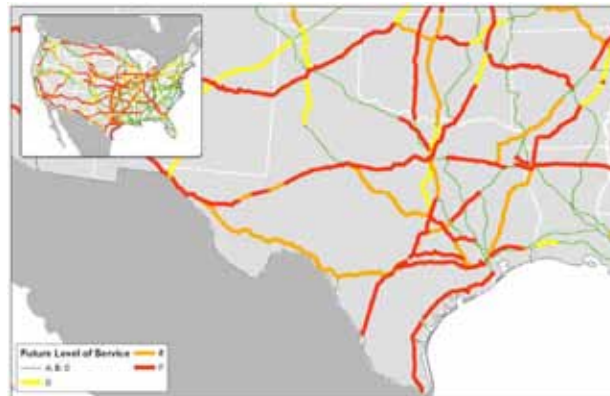
2007	→	2040
336	63%	546
million		million

- Rail market share (tonnage) remain at 14%

Source: FHWA Freight Analysis Framework (FAF³) 2007-2040

Note: Data shows combined total flows of commodities originating from Texas and destined for Texas, including both domestic and foreign shipments. Dollars are 2007 values, based on the earliest report FAF³ year.

Projected Railroad Level of Service, 2030



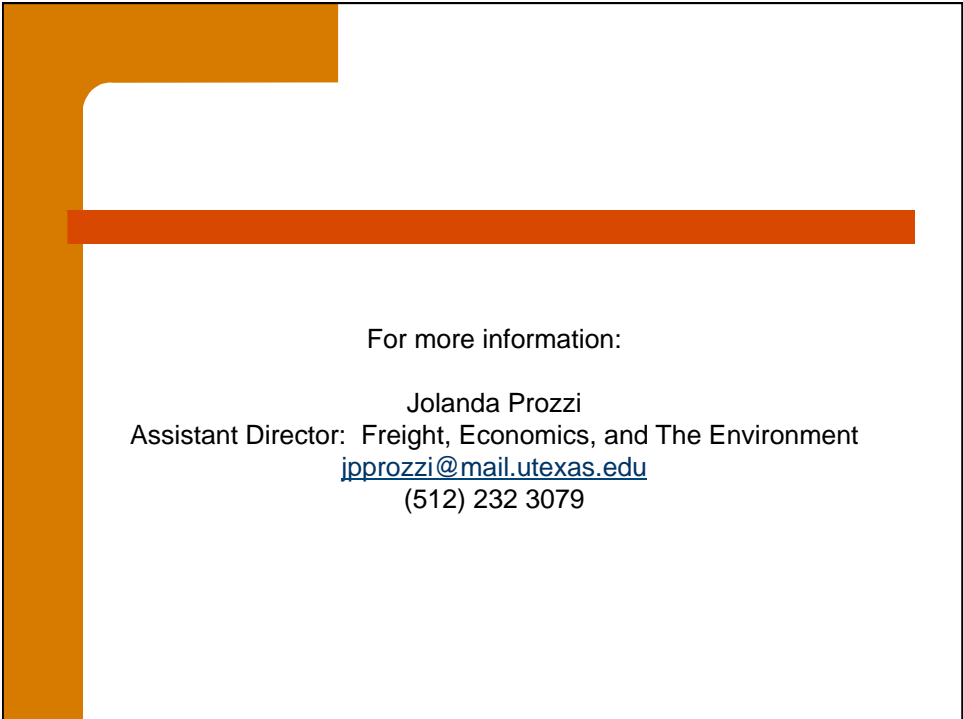
Source: Association of American Railroads National Rail Freight Infrastructure Capacity and Investment Study.

What is TxDOT doing?

- Careful planning
 - Identified number of rail improvements (TxDOT Freight studies)
- Coordinate with private rail industry
- Public-Partnerships
 - Private nature of rail system limit role of state
- Accessing federal programs
 - Current funding sources mainly limited to federal sources
- Explore state and local funding sources
 - Rail Relocation and Improvement Fund and State Infrastructure Bank to leverage private and federal capital

Content of Texas Rail Plan

- Introduction
- Outreach Process
- Freight Rail Systems
- Passenger Rail Systems
- Safety and Security
- Financial Options
- Short- and Long-Term Investment Program



For more information:

Jolanda Prozzi
Assistant Director: Freight, Economics, and The Environment
jpprozi@mail.utexas.edu
(512) 232 3079